

Appl. No. 10/820,909
Amdt. dated 10/4/2005
Reply to Office action of July 29, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Original): A vehicle dump body elevation device comprising:

at least one hinge assembly for attaching a dump body to a vehicle frame, the hinge assembly having a lowered position wherein the dump body is substantially horizontal and a raised position wherein a front portion of the dump body is elevated higher than a rear portion of the dump body, and wherein the rear portion of the dump body is elevated clear of a rear bumper mounted on the vehicle frame;

wherein the hinge assembly moves both the front and the rear portions of the dump body upwardly while pivoting the dump body to the raised position; and

at least one hoist having a lower end pivotally attached to the vehicle frame and an upper end pivotally attached to the dump body.

Claim 2 (Currently Amended): A vehicle dump body elevation device according to claim 1, wherein the hinge assembly further comprises:

a front link member pivotally mounted to the dump body;

a main link member having a first end pivotally attached to the front link member, a second end pivotally mounted to a the vehicle frame, and an attachment means disposed therebetween for pivotal attachment to a rear link member;

the rear link member having a first end attached to a center linking member, and a second end pivotally mounted to the dump body; and

wherein an end of the center linking member comprises a mounting means for attachment to the vehicle frame.

Claim 3 (Original): A vehicle dump body elevation device according to claim 2, wherein the rear link member is pivotally attached to the attachment means of the main link member at about the center of the rear link member.

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Claim 4 (Currently Amended): A vehicle dump body elevation device according to claim 3, wherein the attachment means is a pivot mount fixedly attached to the ~~main link member~~ main link member.

Claim 5 (Currently Amended): A vehicle dump body elevation device according to claim 2, wherein the at least one hoist is disposed between a first hinge assembly and a second hinge assembly.

Claim 6 (Original): A vehicle dump body elevation device according to claim 5, wherein the front link members are pivotally mounted to an underside of the dump body

Claim 7 (Original) A vehicle dump body elevation device according to claim 6, wherein at least one torsion bar is disposed between and attached to the first hinge assembly and the second hinge assembly.

Claim 8 (Original): A vehicle dump body elevation device according to claim 7, wherein the center linking member comprises a first end pivotally attached to the rear link member and a second end pivotally mounted to the vehicle frame.

Claim 9 (Original): A vehicle dump body elevation device according to claim 1, wherein the hoist comprises a scissor hoist mechanism.

Claim 10 (Original): A vehicle dump body elevation device according to claim 9, wherein the scissor hoist mechanism has a range of motion up to about 180 degrees.

Claim 11 (Currently Amended): A vehicle dump body elevation device according to claim 10, wherein the scissor hoist mechanism comprises:

a channeled hinge having a first upwardly extending end and a second upwardly extending end defining a space therebetween, wherein each upwardly extending end has an upper pivot pin and a lower pivot pin extending outwardly therefrom;

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two lower scissor arms, each comprising a first end pivotally attached to a one said lower pivot pin and a second end pivotally attached to the vehicle frame;

two upper scissor arms, each comprising a first end pivotally attached to an one said upper pivot pin and a second end pivotally attached to the dump body;

a lifting means for moving the scissor hoist mechanism from a closed position to an open position, wherein the lifting means is disposed between the lower scissor arms and the upper scissor arms, and wherein the lifting means comprises a base end pivotally attached to the lower scissor arms and an extending end pivotally attached to the upper scissor arms.

Claim 12 (Original): A vehicle dump body elevation device according to claim 11, wherein each second end of each upper scissor arm is pivotally attached to the underside of the dump body.

Claim 13 (Currently Amended): A vehicle dump body elevation device according to claim 12, wherein at least one said lower pivot pin extends beyond the corresponding lower scissor arm.

Claim 14 (Currently Amended): A vehicle dump body elevation device according to claim 13, wherein at least one said upper scissor arm comprises a pivot block means for selectively pivoting the two upper scissor arms and the two lower scissor arms about the upper pivot pins and the lower pivot pins.

Claim 15 (Original): A vehicle dump body elevation device according to claim 14, wherein the lifting means has an extended position wherein an extending member is disposed within the space defined by the upwardly extending ends of the channeled hinge.

Claim 16 (Original): A vehicle dump body elevation device according to claim 15, wherein the extended position of the lifting means orients the scissor arms at about 180 degrees.

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Claim 17 (Original): A vehicle dump body elevation device according to claim 16, wherein the scissor hoist mechanism further comprises at least one safety pin for securing the hoist in the open position.

Claim 18 (Original): A vehicle dump body elevation device according to claim 16, wherein the lifting means is a hydraulic cylinder.

Claim 19 (Original): A vehicle dump body elevation device according to claim 18, wherein the hydraulic cylinder is a single acting hydraulic cylinder.

Claim 20 (Original): A vehicle dump body elevation device according to claim 19, wherein the hydraulic cylinder comprises a housing having an air vent disposed therein, and a low pressure hose having a first end attached to the air vent, wherein the hydraulic cylinder is vented through the low pressure hose, and outward through a second end of the low pressure hose into a reservoir.

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Claim 21 (Currently Amended): A kit for modifying a vehicle to function as a dump truck, the kit comprising:

at least one hinge assembly to move a dump body between a lowered position, wherein the dump body is substantially horizontal, and a raised position, wherein a front portion of the dump body is elevated higher than a rear portion of the dump body, and wherein the rear portion of the dump body is elevated clear of a rear bumper mounted on a vehicle frame;

wherein the hinge assembly moves both the front and the rear portions of the dump body upwardly, while pivoting the dump body to ~~the~~ an angled position; and

at least one hoist having a first means for pivotal attachment to the vehicle frame and a second means for pivotal attachment to the dump body.

Claim 22 (Currently Amended): A kit according to claim 21, wherein the hinge assembly comprises:

a front link member comprising a first mounting means for pivotal attachment to the dump body;

a main link member having a first end pivotally attached to the front link member, a second end having a second mounting means for pivotal mounting to ~~a~~ the vehicle frame, and an attachment means disposed therebetween for pivotal attachment to a rear link member;

the rear link member having a first end attached to a center linking member, and a second end comprising a rear link mounting means for pivotal attachment to the dump body; and

wherein an end of the center linking member comprises a center linking mounting means for attachment to the vehicle frame.

Claim 23 (Original): A vehicle dump body elevation device according to claim 22, wherein the rear link member is pivotally attached to the attachment means of the main link member at about the center of the rear link member.

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Claim 24 (Currently Amended): A vehicle dump body elevation device according to claim 23 wherein the attachment means is a pivot mount fixedly attached to the main link member.

Claim 25 (Currently Amended): A kit according to claim 22, wherein the kit further comprises at the least one hoist disposed between a first hinge assembly and a second hinge assembly.

Claim 26 (Original): A kit according to claim 25, wherein the kit further comprises at least one torsion bar disposed between and attached to the first hinge assembly and the second hinge assembly.

Claim 27 (Currently Amended): A kit according to claim 26, wherein each front link ~~members~~ member further comprises a first mounting means for pivotal attachment to an underside of the dump body.

Claim 28 (Currently Amended): A kit according to claim 27, wherein the center linking member is pivotally attached to the rear link member and further comprises a ~~pivotal~~ mounting means for pivotal attachment to the vehicle frame.

Claim 29 (Original): A kit according to claim 21, wherein the hoist is a scissor hoist mechanism.

Claim 30 (Original): A kit according to claim 29, wherein the scissor hoist mechanism has a range of motion up to about 180 degrees.

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Claim 35 (Currently Amended): A kit according to claim 34, wherein the scissor hoist mechanism further comprises at least one safety pin for securing the hoist in the open position.

Claim 36 (Original): A kit according to claim 34, wherein the lifting means is a hydraulic cylinder.

Claim 37 (Original): A kit according to claim 36, wherein the hydraulic cylinder is a single acting hydraulic cylinder.

Claim 38 (Original): A kit according to claim 37, wherein the hydraulic cylinder comprises a housing having an air vent disposed therein, and a low pressure hose having a first end attached to the air vent, wherein the hydraulic cylinder is vented through the low pressure hose, and outward through a second end of the low pressure hose into a reservoir.

Claim 39 (Currently Amended): A method of converting a ~~vehicle from~~ a fixed bed vehicle to a dump truck, the method comprising;

- a) removing a fixed bed from a the fixed bed vehicle;
- b) providing a vehicle dump body elevation device comprising at least one hinge assembly to move a dump body between a lowered position wherein the dump body is substantially horizontal, and a raised position wherein a front portion of the dump body is elevated higher than a rear portion of the dump body, and wherein the rear portion of the dump body is elevated clear of a rear bumper mounted on the vehicle frame;

wherein the hinge assembly moves both the front and the rear portions of the dump body upwardly, while pivoting the dump body to the raised position; and

at least one hoist having a first means for pivotal attachment to a the vehicle frame and a second means for pivotal attachment to the dump body;

- c) mounting the hinge assembly to the vehicle frame;

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Claim 31 (Currently Amended): A kit according to claim 30, wherein the scissor hoist mechanism comprises:

a channeled hinge having a first upwardly extending end and a second upwardly extending end defining a space therebetween, wherein each upwardly extending end has an upper pivot pin and a lower pivot pin extending outwardly therefrom;

two lower scissor arms, each comprising a first end pivotally attached to a lower pivot pin and a second end having a lower scissor arm mounting means for pivotal attachment to the vehicle frame;

two upper scissor arms, each comprising a first end pivotally attached to an upper pivot pin and a second end having a an upper scissor arm mounting means for pivotal attachment to the dump body; and

a lifting means for moving the scissor hoist mechanism from a closed position to an open position, wherein the lifting means is disposed between the lower scissor arms and the upper scissor arms, the lifting means having a base end pivotally attached to the lower scissor arms and an extending end pivotally attached to the upper scissor arms.

Claim 32 (Currently Amended): A kit according to claim 31, wherein ~~the each second end of the each upper scissor arm has a mounting means for~~ is pivotally attached ~~pivotal attachment~~ to the underside of the dump body.

Claim 33 (Original): A kit according to claim 32, wherein the lifting means has an extended position wherein an extending member is disposed within the space defined by the upwardly extending ends of the channeled hinge.

Claim 34 (Original): A kit according to claim 33, wherein the extended position of the lifting means orients the scissor arms at about 180 degrees.

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- d) mounting the hoist to the vehicle frame; and
- e) mounting the hinge assembly and the hoist to the dump body.

5 Claim 40 (Original): The method according to claim 39, wherein the hinge assembly is pivotally mounted to the vehicle frame.

Claim 41 (Original): The method according to claim 40, wherein the hoist is pivotally mounted to the vehicle frame.

10 Claim 42 (Original): The method according to claim 41, wherein the hinge assembly and the hoist are pivotally mounted to the dump body.

15 Claim 43 (Original): The method according to claim 42, wherein the hinge assembly and the hoist are pivotally mounted to the underside of the dump body.